SEQUENCE LISTING

<110> Riechmann, Lutz

       Kristensen, Peter

       Jestin, Jean-Luc

       Winter, Gregory

<120> Selection System

<130> 8039/1090

<140> 09/710,444

<141> 2000-11-20

<150> GB 9810223.9

<151> 1998-05-13

<150> GB 9810228.8

<151> 1998-05-13

<150> PCT/GB99/01526

<151> 1999-05-13

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<170> PatentIn version 3.1

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Pro Ala Gly Leu Ser Glu Gly Ser Thr Ile Glu Gly Arg Gly Ala His
1   5   10   15

Glu

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ggcaccctca gaacggtacc ccaccctcag aggccggctg ggccgccacc ctcagag   57

<210> 3

<211> 89

<212> DNA

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ggtggcggcc cagccggcct ttctgagggg tcgactatag aaggacgagg gcccagcgaa   60

ggaggtgggg tacccccttc tgagggtgg   89

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ccaccctcag aaggggggtac cccacctcct tcgctgggcc ctcgtccttc tatagtcgac   60

ccctcagaaa ggccggctgg gccgccacc   89

<210> 5

<211> 24

<212> DNA

<213> Artificial sequence

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<222> (1)..(24)

<223> Synthetic PCR primer for vector construction/screening

<400> 5
gcgatggttg ttgtcattgt cggc   24

<210> 6

<211> 24

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<222> (1)..(24)

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aaaagaaacg caaagacacc acgg                                      24


<210>  7

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<222>  (1)..(23)

<223>  Synthetic PCR primer for vector construction/screening



<400>  7
cctcctgagt acggtgatac acc                                       23


<210>  8

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<212>  DNA

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<220>

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<220>

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<222>  (1)..(24)

<223>  Synthetic PCR primer used to screen for recombinant clones
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<400> 8
gtaaattcag agactgcgct ttcc   24

<210> 9

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<220>

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<222> (1)..(26)

<223> Synthetic PCR primer used to screen for recombinant clones

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attttcggtc atagccccct tattag   26

<210> 10

<211> 65

<212> DNA

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<223> Synthetic PCR primer recognizing FLAG tag nucleotide sequence

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caaacgggcg gccgcagact acaaggatga cgacgacaag gaaactgttg aaagttgttt   60

agcaa   65

<210> 11

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<220>

<221> misc_feature

<222> (1)..(51)

<223> Synthetic PCR primer used to change codon usage in recombinant cl
      ones

<400> 11
cccctcagaa aggccggctg ggccgccgcc agcattgaca ggaggttcag g   51

<210> 12

<211> 52

<212> DNA

<213> Artificial sequence

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<223> Synthetic PCR primer used to change codon usage in recombinant cl
      ones.

<220>

<221> misc_feature

<222> (1)..(52)

<223> Synthetic PCR primer used to change codon usage in recombinant cl
      ones

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gaaggaggtg gggtacccgg ttccgagggt ggttccggtt ccggtgattt tg   52

<210> 13

<211> 36

<212> DNA

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<222> (1)..(36)

<223> Synthetic PCR primer for vector construction/screening

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ccctcggaac cggtaccccca gctgcttcgt gggccc   36

<210> 14

<211> 47

<212> DNA

<213> Bacillus amyloliquefaciens

<400> 14
ctggcggcgg cccagccggc cctgcacagg ttatcaacac gtttgac   47

<210> 15

<211> 43

<212> DNA

8

<213> Bacillus amyloliquefaciens

<400> 15
ctcggaaccg gtacctctga tttttgtaaa ggtctgataa gcg   43

<210> 16

<211> 44

<212> DNA

<213> Gallus gallus

<400> 16
ggcggcccag ccggcctttc tctctctgac gaggacttca aggc   44

<210> 17

<211> 41

<212> DNA

<213> Gallus gallus

<400> 17
cctcggaacc ggtaccgaag agtcctttct ccttcttgag g   41

<210> 18

<211> 18

<212> DNA

<213> Artificial sequence

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<223> Synthetic PCR primer used for library construction.

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<222> (1)..(18)

<223> Synthetic PCR primer used for library construction

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<400>  18
tacgccaagc ttgcatgc                                                    18


<210>  19

<211>  17

<212>  DNA

<213>  Artificial sequence


<220>

<223>  Synthetic PCR primer used for library construction.

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<221>  misc_feature

<222>  (1)..(17)

<223>  Synthetic PCR primer used for library constuction


<400>  19
ctgcacctgg gccatgg                                                     17


<210>  20

<211>  17

<212>  DNA

<213>  Artificial sequence


<220>

<223>  Synthetic PCR primer used for library construction.

<220>

<221>  misc_feature

<222>  (1)..(17)

<223>  Synthetic PCR primer used for library construction
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<400>  20
gattacgcca agctttg                                                17


<210>  21

<211>  126

<212>  DNA

<213>  Erwinia chrysanthemi


<220>

<221>  misc_feature

<223>  n at positions 23, 24, 29, 55, 56, 81, 97, 101, and 102 can be G,
       A, T or C


<220>

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<222>  (23)..(23)

<223>  n at position 23 can be G, A, T or C


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<221>  misc_feature

<222>  (24)..(24)

<223>  n at position 24 can be G, A, T or C


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<221>  misc_feature

<222>  (29)..(29)

<223>  n at position 29 can be G, A, T or C


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<221>  misc_feature

<222>  (55)..(55)

<223>  n at position 55 can be G, A, T or C


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<221>  misc_feature

<222>  (56)..(56)

<223>  n at position 56 can be G, A, T or C


<220>

<221>  misc_feature

<222>  (81)..(81)

<223>  n at position 81 can be G, A, T or C


<220>

<221>  misc_feature

<222>  (97)..(97)

<223>  n at position 97 can be G, A, T or C


<220>

<221>  misc_feature

<222>  (101)..(101)

<223>  n at position 101 can be G, A, T or C


<220>

<221>  misc_feature

<222>  (102)..(102)

<223>  n at position 102 can be G, A, T or C
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<400> 21

gattacgcca agcttgcatg cannddctnt dtcaaggaga cagtcataat garrnnbcta   60

ttgsyaayrs yasyasyagb nttgttatta ctcsyanycv nncygdccat ggcccaggtg   120

cagctg   126

<210> 22

<211> 117

<212> DNA

<213> Bacteriophage M13mp18

<220>

<221> misc_feature

<222> (18)..(18)

<223> Nucleotide at position 18 can be G, A, T or C.

<220>

<221> misc_feature

<222> (19)..(19)

<223> Nucleotide at position 19 can be G, A, T or C.

<220>

<221> misc_feature

<222> (20)..(20)

<223> Nucleotide at position 20 can be G, A, T or C.

<220>

<221> misc_feature

<222> (21)..(21)

<223> Nucleotide at position 21 can be G, A, T or C.

<400> 22

gattacgcca agctttgnnn nctttttttww ggagattttc aacrtgaraa rattattatt   60

csyaattsyt ttagttsyts ytttctwtgy ggyccagccg gccatggccc aggtgca   117

<210> 23

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic PCR primer used for vector construction.

<400> 23
ctttatgctt ccggctcg   18

<210> 24

<211> 17

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic PCR primer for library construction.

<220>

<221> misc_feature

<222> (1)..(17)

<223> Synthetic PCR primer for library construction

<400> 24
cggccccatt cagatcc   17

<210> 25

<211> 50

<212> DNA

<213> Artificial sequence

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<223> Randomized E. chrysanthemi pelB sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized E. chrysanthemi pelB sequence

<400> 25
aagcttgcat gcaaattcta tdtcaaggag acagttataa tgaaatacct   50

<210> 26

<211> 50

<212> DNA

<213> Artificial sequence

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<221> misc_feature

<222> (14)..(14)

<223> n at position 14 can be G, A, T or C.

<220>

<221> misc_feature

<222> (15)..(15)

<223> n at position 15 can be G, A, T or C.

<220>

<221> misc_feature

<222> (20)..(20)

<223> n at position 20 can be G, A, T or C.

<220>

<221> misc_feature

<222> (45)..(45)

<223> n at position 45 can be G, A, T or C.

<220>

<221> misc_feature

<222> (46)..(46)

<223> n at position 46 can be G, A, T or C.

<400> 26
aagcttgcat gcannddctn tdtcaaggag acagtcataa tgarrnnbct   50

<210> 27

<211> 50

<212> DNA

<213> Artificial sequence

<220>

16

<223> Randomized E. chrysanthemi pelB sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized E. chrysanthemi pelB sequence

<400> 27
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<210> 28

<211> 50

<212> DNA

<213> Artificial sequence

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<221> misc_feature

<222> (1)..(50)

<223> Randomized E. chrysanthemi pelB sequence

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aagcttgcat gcacgggctg tdtcaaggag acagtcataa tgagagggct   50

<210> 29

<211> 50

<212> DNA

<213> Artificial sequence

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17

<223> Randomized E. chrysanthemi pelB sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized E. chrysanthemi pelB sequence

<400> 29
aagcttgcat gcaccagctc tdtcaaggag acagtcataa tgaggcggct   50

<210> 30

<211> 55

<212> DNA

<213> Artificial sequence

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<222> (1)..(55)

<223> Randomized E. chrysanthemi pelB sequence

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attcctaacg gcagccgctg gattgttatt actcgcggcc cagccggcca tggcc   55

<210> 31

<211> 55

<212> DNA

<213> Artificial sequence

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<222> (1)..(55)

<223> Randomized E. chrysanthemi pelB sequence

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<221> misc_feature

<222> (22)..(22)

<223> n at position 22 can be G, A, T or C.

<220>

<221> misc_feature

<222> (38)..(38)

<223> n at position 38 can be G, A, T or C.

<220>

<221> misc_feature

<222> (42)..(42)

<223> n at position 42 can be G, A, T or C.

<220>

<221> misc_feature

<222> (43)..(43)

<223> n at position 43 can be G, A, T or C.

<400> 31
attgsyaayr syasyasyag bnttgttatt actcsyanyc vnncygdcca tggcc   55

<210> 32

<211> 55

<212> DNA

<213> Artificial sequence

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<222> (1)..(55)

<223> Randomized E. chrysanthemi pelB sequence

<400> 32
attgcyaatg gtactgtyag gattgttatt actcccaccc ggtccgtcca tggcc   55

<210> 33

<211> 55

<212> DNA

<213> Artificial sequence
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<220>

<223> Randomized E. chrysanthemi pelB sequence.

<220>

<221> misc_feature

<222> (1)..(55)

<223> Randomized E. chrysanthemi pelB sequence

<400> 33
attgcyaatg ctagtgcyag ggttgttatt actcccaatc gcgccggcca tggcc   55

<210> 34

<211> 54

<212> DNA

<213> Artificial sequence

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<223> Randomized E. chrysanthemi pelB sequence.

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<221> misc_feature

<222> (1)..(54)

<223> Randomized E. chrysanthemi pelB sequence

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<221> misc_feature

<222> (22)..(22)

<223> n at position 22 can be G, A, T or C.

<220>

<221> misc_feature

<222> (43)..(43)

<223> n at position 43 can be G, A, T or C.

<220>

<221> misc_feature

<222> (44)..(44)

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<400> 34
attggtaata gcagcagtag bnttgttagg actcgcaccc ccnncyadcc atgg   54

<210> 35

<211> 22

<212> PRT

<213> Erwinia chrysanthemi

<400> 35

Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala
1   5   10   15

Ala Gln Pro Ala Met Ala
            20

<210> 36

<211> 22

<212> PRT

<213> Artificial sequence

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<223> Randomized E. chrysanthemi pelB sequence.

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<221> MISC_FEATURE

<222> (1)..(22)

<223> Randomized E. chrysanthemi pelB sequence

<400> 36

Met Lys Thr Leu Ala Met Val Leu Val Gly Gly Pro Pro Gly Pro Ser
1   5   10   15

Ala Gln Pro Ala Met Ala
            20

<210> 37

<211> 21

<212> PRT

<213> Artificial sequence

<220>

<223> Randomized E. chrysanthemi pelB sequence.

<220>

<221> MISC_FEATURE

<222> (1)..(21)

<223> Randomized E. chrysanthemi pelB sequence

<400> 37

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Met Arg Gly Leu Ala Met Leu Val Ala Gly Gly Pro Ile Ala Pro Ala
1               5                   10                  15

Gln Pro Ala Met Ala
            20
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<210> 38

<211> 23

<212> PRT

<213> Artificial sequence

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<223> Randomized E. chrysanthemi pelB sequence.

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<221> MISC_FEATURE

<222> (1)..(23)

<223> Randomized E. chrysanthemi pelB sequence

<400> 38

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Met Arg Arg Leu Val Pro Ile Thr Ala Ala Val Gly Leu Leu Ala Pro
1               5                   10                  15
```

Pro Thr Gln Pro Ala Met Ala
            20

<210> 39

<211> 50

<212> DNA

<213> Artificial sequence

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<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence

<400> 39
aagctttgga cgcttttttt tggagatttt caacgtgaaa aaattattat   50

<210> 40

<211> 50

<212> DNA

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<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> misc_feature

<222> (9)..(9)

<223> n at position 9 is can be G, A, t or C.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence

<220>

<221> misc_feature

<222> (10)..(10)

<223> n at position 10 is can be G, A, t or C.

<220>

<221> misc_feature

<222> (11)..(11)

<223> n at position 11 is can be G, A, t or C.

<220>

<221> misc_feature

<222> (12)..(12)

<223> n at position 12 is can be G, A, t or C.

<400> 40
aagctttgnn nncttttttw wggagatttt caacrtgara arattattat   50

<210> 41

<211> 50

<212> DNA

<213> Artificial sequence

<220>

<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence.

<400> 41
aagctttggg gcctttttttt aggagatttt caacatgaga agattattat   50

<210> 42

<211> 50

<212> DNA

<213> Artificial sequence

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<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence

<400> 42
tcgcaattcc tttagttgtt cctttctatg cggcccagcc ggccatggcc   50

<210> 43

<211> 50

<212> DNA

<213> Artificial sequence

<220>

<223> Randomized bacteriophage M13 g3 sequence.

26

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence

<400> 43
tcsyaattsy tttagttsyt sytttctwtg yggyccagcc ggccatggcc   50

<210> 44

<211> 50

<212> DNA

<213> Artificial sequence

<220>

<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> misc_feature

<222> (1)..(50)

<223> Randomized bacteriophage M13 g3 sequence

<400> 44
tcctaattcc tttagttgtt gctttctatg tggtccagcc ggccatggcc   50

<210> 45

<211> 22

<212> PRT

<213> Artificial sequence

<220>

<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> MISC_FEATURE

<222> (1)..(22)

<223> Randomized bacteriophage M13 g3 sequence

<400> 45

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ala
1   5   10   15

Ala Gln Pro Ala Met Ala
            20

<210> 46

<211> 22

<212> PRT

<213> Artificial sequence

<220>

<223> Randomized bacteriophage M13 g3 sequence.

<220>

<221> MISC_FEATURE

<222> (1)..(22)

<223> Randomized bacteriophage M13 g3 sequence

<400> 46

Met Arg Arg Leu Leu Leu Ala Pro Pro Val Ala Val Pro Phe Tyr Val
1   5   10   15

Val Gln Pro Ala Met Ala
            20

<210> 47

<211> 18

28

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide primer used as a substrate for Stoffel
fragment of Thermus aquaticus DNA polymerase I.

<220>

<221> misc_feature

<222> (1)..(18)

<223> Synthetic oligonucleotide primer used as substrate for Stoffel fr
agment of Thermus aquaticus DNA polymerase I

<400> 47
tttcgcaaga tgtggcgt   18

<210> 48

<211> 12

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide primer used as a substrate for Thermus
aquaticus DNA polymerase I.

<220>

<221> misc_feature

<222> (1)..(12)

<223> Synthetic primer used as substrate for Stoffel fragment of Thermu
s aquaticus DNA polymerase I

<400> 48
gcgaagatgt gg   12

<210> 49

<211> 30

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide primer used as a substrate for Thermus
aquaticus DNA polymerase I.

<220>

<221> misc_feature

<222> (1)..(30)

<223> Synthetic oligonucleotide primer used as substrate for Thermus aq
uaticus DNA polymerase I

<400> 49
aaatacaaca ataaaacgcc acatcttgcg   30

<210> 50

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide sequence insert containing PstI restric
tion site and frame shift for H102A mutant barnase fusion constru
ct fused to p3 gene of phage fd-3.

<220>

<221> misc_feature

<222> (1)..(20)

<223> Synthetic oligonucleotide sequence insert containing PstI restric
tion site and frame shift for H102A mutant barnase fusion constru
ct fused to p3 gene of phage fd-3.

<400> 50
ctgcaggcgg tgcggccgca   20

<210> 51

<211> 24

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide used for random priming.

<220>

<221> misc_feature

<222> (1)..(24)

<223> Synthetic oligonucleotide used for random priming

<220>

<221> misc_feature

<222> (19)..(19)

<223> n at position 19 can be G, A, T or C.

<220>

<221> misc_feature

<222> (20)..(20)

<223> n at position 20 can be G, A, T or C.

<220>

<221> misc_feature

<222> (21)..(21)

<223> n at position 21 can be G, A, T or C.

<220>

<221> misc_feature

<222> (22)..(22)

<223> n at position 22 can be G, A, T or C.

<220>

<221> misc_feature

<222> (23)..(23)

<223> n at position 23 can be G, A, T or C.

<220>

<221> misc_feature

<222> (24)..(24)

<223> n at position 24 can be G, A, T or C.

<400> 51
gagcctgcag agctcaggnn nnnn   24

<210> 52

<211> 23

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic PCR primer used to re-amplify randomply amplified E. co
       li genomic DNA sequence.

<220>

<221> misc_feature

<222> (1)..(23)

<223> Synthetic PCR primer used to re-amplify randomly amplified E. col
       i genomic DNA sequences.

<400> 52
cgtgcgagcc tgcagagctc agg   23

<210> 53

<211> 45

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(45)

<223> Barstar binding barnase-p3 fusion insert

<400> 53

Leu Gln Ser Ser Gly Asp Cys Val Ile Ser Asp Thr Cys Ile Ala Gly
1   5   10   15

Met Ala Glu Ala Ala Ala Cys Glu Glu Lys Phe Ser Ser Gln Asn Val
            20   25   30

Gly Leu Thr Ile Thr Val Thr Pro Cys Leu Ser Ser Ala
        35   40   45

<210> 54

<211> 44

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(44)

<223> Barstar binding barnase-p3 fusion insert

<400> 54

Leu Gln Ser Ser Gly Cys Gly Ser Ser Gly Ser Ser Ile Asn Cys Leu
1   5   10   15

Pro Cys Gly Ala Thr Ser Arg Gly Thr Ser Pro Leu Ala Ser Gly Leu
                20   25   30

Pro Ser Ser Ala Thr Ile His Cys Leu Ser Ser Ala
            35   40

<210> 55

<211> 40

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(40)

<223> Barstar binding barnase-p3 fusion insert

<400> 55

Leu Gln Ser Ser Gly Asp Ser Ala Gly Cys Lys Asn Met Thr Gly Gly
1   5   10   15

Arg Leu Tyr Ala His Thr Leu Glu Ala Ile Ile Pro Gly Phe Ala Val
              20   25   30

Ser Ala Pro Ala Cys Glu Pro Ala
         35   40

<210> 56

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(33)

<223> Barstar binding barnase-p3 fusion insert

<400> 56

Leu Gln Ser Ser Gly Cys Val Arg Leu Lys Arg Thr Ser Val Asn His
1   5   10   15

Gln Pro Asp Ala Trp Pro Glu Pro His Leu Lys Ala Ala Cys Glu Pro
              20   25   30

Ala

<210> 57

<211> 44

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(44)

<223> Barstar binding barnase-p3 fusion insert

<400> 57

Leu Gln Ser Ser Gly Cys Gly Ser Ser Gly Ser Ser Ile Asn Cys Leu
1   5   10   15

Pro Cys Gly Ala Thr Ser Arg Gly Thr Ser Pro Leu Ala Ser Gly Leu
                20   25   30

Pro Ser Ser Ala Thr Val Gln Cys Leu Ser Ser Ala
            35   40

<210> 58

<211> 41

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(41)

<223> Barstar binding barnase-p3 fusion insert

<400> 58

Leu Gln Ser Ser Gly Lys Ile Val Gln Ala Gly Ala Asn Ile Gln Asp
1   5   10   15

36

Gly Cys Ile Met His Gly Tyr Cys Asp Thr Asp Thr Ile Val Gly Glu
            20   25   30

Asn Gly His Ile Gly Leu Ser Ser Ala
        35   40

<210> 59

<211> 45

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(45)

<223> Barstar binding barnase-p3 fusion insert

<400> 59

Leu Gln Ser Ser Gly Val Cys Val Ile Ser Asp Thr Cys Ile Ala Gly
1   5   10   15

Thr Ala Glu Ala Ala Ala Cys Glu Glu Lys Phe Ser Ser Gln Asn Val
            20   25   30

Gly His Thr Ile Thr Glu Thr Pro Cys Leu Ser Ser Ala
        35   40   45

<210> 60

<211> 44

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(44)

<223> Barstar binding barnase-p3 fusion insert

<400> 60

Leu Gln Ser Ser Gly Cys Gly Ser Ser Gly Ser Ser Ile Asn Cys Leu
1   5   10   15

Pro Cys Gly Ala Thr Ser Arg Gly Thr Ser Pro Leu Ala Ser Gly Leu
                20   25   30

Pro Ser Ser Ala Thr Ile Gln Cys Leu Ser Ser Ala
                35   40

<210> 61

<211> 53

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(53)

<223> Barstar binding barnase-p3 fusion insert

<400> 61

Leu Gln Ser Ser Gly Gln Asp Ser Gln Arg Glu His Ala Ser His Thr
1   5   10   15

Ala Glu Asp Asp Cys Glu Asp Gln Thr Arg Ile His Gln His Ile Arg
        20   25   30

Glu Val Asp Phe Val Asp Thr Pro Gln Glu Val Asp Asp Cys Arg Ala
        35   40   45

Ala Leu Ser Ser Ala
    50

<210> 62

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(33)

<223> Barstar binding barnase-p3 fusion insert

<400> 62

Leu Gln Ser Ser Gly Cys Val Arg Leu Lys Arg Thr Ser Val Asn His
1   5   10   15

Gln Pro Asp Ala Trp Pro Glu Pro His Leu Lys Ala Ala Cys Glu Pro
        20   25   30

Ala

<210> 63

<211> 9

<212> PRT

<210> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(9)

<223> Barstar binding barnase-p3 fusion insert

<400> 63

Leu Gln Ser Ser Gly Val Arg Pro Ala
1   5

<210> 64

<211> 44

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(44)

<223> Barstar binding barnase-p3 fusion insert

<400> 64

Leu Gln Ser Ser Gly Cys Gly Ser Ser Gly Ser Ser Ile Asn Cys Leu
1   5   10   15

Pro Cys Gly Ala Thr Ser Arg Gly Thr Ser Pro Leu Ala Ser Gly Leu
            20   25   30

Pro Ser Ser Ala Thr Ile Gln Cys Leu Ser Ser Ala
        35   40

<210> 65

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(30)

<223> Barstar binding barnase-p3 fusion insert

<400> 65

Leu Gln Ser Ser Gly Thr Glu Val Asp Arg Gly Asn Gln Gln His Asp
1   5   10   15

Thr Asn Asp Arg Asp Phe Thr His Thr Pro Leu Ser Ser Ala
            20   25   30

<210> 66

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(36)

<223> Barstar binding barnase-p3 fusion insert

<400> 66

Leu Gln Ser Ser Gly Val Ala Gln Gly Ser Ser Ala Ser Val Asp Val
1   5   10   15

Thr Ala Thr Asn Ala Val Leu Ser Ala Asp Ser Leu Ser Leu Gly Gly
            20   25   30

Gly Glu Pro Ala
        35

<210> 67

<211> 19

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(19)

<223> Barstar binding barnase-p3 fusion insert

<400> 67

Leu Gln Ser Ser Gly Gly Ala Val Ala Val Thr Pro Gly Pro Val Leu
1   5   10   15

Ser Ser Ala

<210> 68

<211> 18

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(18)

<223> Barstar binding barnase-p3 fusion insert

<400> 68

Leu Gln Ser Ser Gly His Cys Arg Gly Lys Pro Val Leu Cys Thr His
1   5   10   15

Thr Ala

<210> 69

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(9)

<223> Barstar binding barnase-p3 fusion insert

<400> 69

Leu Gln Ser Ser Gly Val Arg Pro Ala
1   5

<210> 70

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(36)

<223> Barstar binding barnase-p3 fusion insert

<400> 70

Leu Gln Ser Ser Gly Glu Pro Ala Pro Ala His Glu Ala Lys Pro Thr
1   5   10   15

Glu Ala Pro Val Ala Lys Ala Glu Ala Lys Pro Glu Thr Pro Ala His
            20   25   30

Leu Ser Ser Ala
        35

<210> 71

<211> 33

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(33)

<223> Barstar binding barnase-p3 fusion insert

<400> 71

Leu Gln Ser Ser Gly Cys Val Arg Leu Lys Arg Thr Ser Val Asn His
1   5   10   15

Gln Pro Asp Ala Trp Pro Glu Pro His Leu Lys Ala Ala Cys Glu Pro
            20   25   30

Ala

<210> 72

<211> 36

<212> PRT

<213> Artificial sequence

<220>

<223> Barstar binding barnase-p3 fusion insert.

<220>

<221> MISC_FEATURE

<222> (1)..(36)

<223> Barstar binding barnase-p3 fusion insert

<400> 72

Leu Gln Ser Ser Gly Val Val Asp Trp Ala Lys Met Arg Glu Ile Ala
1   5   10   15

Asp Ser Ile Gly Ala Tyr Leu Phe Val Asp Met Ala His Val Ala Ala
            20   25   30

45

Leu Ser Ser Ala
        35

<210> 73

<211> 117

<212> DNA

<213> Artificial sequence

<220>

<223> Vector pK1 polylinker sequence.

<220>

<221> misc_feature

<222> (1)..(117)

<223> Vector pK1 polylinker sequence

<400> 73
aatgctggcg gcggcccagc cggcctttct gagggggtcga ctatagaagg acgagggggcc   60

cacgaaggag gtggggtacc cggttccgag ggtggttccg gttccggtga ttttgat   117

<210> 74

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptide encoded by pK1 vector polylinker sequence.

<220>

<221> MISC_FEATURE

<222> (1)..(39)

<223> Polypeptide encoded by pK1 vector polylinker sequence

<400> 74

Asn Ala Gly Gly Gly Pro Ala Gly Leu Ser Glu Gly Ser Thr Ile Glu
1   5   10   15

Gly Arg Gly Ala His Glu Gly Gly Gly Val Pro Gly Ser Glu Gly Gly
            20   25   30

Ser Gly Ser Gly Asp Phe Asp
        35

<210> 75

<211> 117

<212> DNA

<213> Artificial sequence

<220>

<223> Vector pK2 polylinker sequence.

<220>

<221> misc_feature

<222> (1)..(117)

<223> vector pK2 polylinker sequence

<400> 75
aatgctggcg gcggcccagc cggcctttct gaggggtcga ctatagaagg acgagggccc   60

acgaagcagc tggggtaccg gttccgaggg tggttccggt tccggtgatt ttgatta   117

<210> 76

<211> 39

<212> PRT

<213> Artificial sequence

<220>

<223> Polypeptide sequence encoded by vector pK2 polylinker region.

<220>

<221> MISC_FEATURE

<222> (1)..(39)

<223> Polypeptide sequence encoded by vector pK2 polylinker region.

<220>

<221> MISC_FEATURE

<222> (38)..(38)

<223> X represents a TGA stop codon

<220>

<221> MISC_FEATURE

<222> (36)..(36)

<223> X represents a stop codon (TGA)

<400> 76

Asn Ala Gly Gly Gly Pro Ala Gly Leu Ser Glu Gly Ser Thr Ile Glu
1   5   10   15

Gly Arg Gly Pro Thr Lys Gln Leu Gly Tyr Arg Phe Arg Gly Trp Phe
            20   25   30

Arg Phe Arg Xaa Phe Xaa Leu
            35

<210> 77

<211> 35

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence of the junction region between Barnase and p3 in recombi
nant fusion vector fd-3.

<220>

<221> misc_feature

<222> (1)..(35)

<223> Sequence of the junction region between Barnase and p3 in recombi
nant fusion vector fd-3.

<400> 77
atcagactgc aggcggtgcg gccgcagaaa ctgtt   35

<210> 78

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence about the junction of Barnase and p3 coding r
egions of recombinant fusion vector fd-3.

<400> 78

Ile Arg Leu Gln Ala Ala Ala Ala Glu Thr Val
1   5   10

<210> 79

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Factor Xa protease cleavage sequence.

<220>

<221> MISC_FEATURE

49

<222> (1)..(1)

<223> X can be either Ile or Leu.

<220>

<221> MISC_FEATURE

<222> (1)..(4)

<223> Factor Xa proteolytic cleavage site.

<400> 79

Xaa Glu Gly Arg
1

<210> 80

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Artificial linker peptide.

<400> 80

Ala Gly Gly Ala Ala Ala
1   5